

## **CLAIMS**

What is claimed is:

- 5     1.     A device for affecting a fluid within a conduit with far infrared radiation and negative ions, the device comprising a material capable of emitting far infrared radiation and negative ions, the material configured to be engageable with the conduit and allow emitted radiation and ions to affect the fluid within the conduit.
- 10    2.     The device of claim 1, wherein the material includes about 95% or less by weight of a bio-ceramic material and about 5% by weight or less of an oxide material.
3.     The device of claim 2, wherein the oxide material is selected from the group consisting of iron oxide, silicon oxide, titanium oxide, aluminum oxide, magnesium  
15   oxide, derivatives thereof and combinations thereof.
4.     The device of claim 1, wherein the device is configured to allow the material to directly contact the fluid.
- 20    5.     The device of claim 1, wherein the device is configured such that the material does not directly contact the fluid.
6.     The device of claim 1, wherein the fluid is natural gas.
- 25    7.     The device of claim 6, wherein the device affects combustion properties of the natural gas.
8.     The device of claim 6, wherein the material is arranged in a packed-bed formation configured to allow the gas to flow therethrough.  
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9.     The device of claim 1, wherein the fluid is water.
10.    The device of claim 9, wherein the device affects purity of the water.
- 35    11.    A method for affecting combustion properties of a natural gas comprising the steps of:

emitting far infrared radiation and negative ions from a material; and  
introducing the emitted far infrared radiation and negative ions to the natural gas.

12. The method of claim 11, further comprising the step of engaging the material with  
5 a conduit having the natural gas disposed therein to facilitate the introduction of the  
emitted far infrared radiation and negative ions to the natural gas.

13. The method of claim 11, wherein the material is allowed to directly contact the  
natural gas.

14. The method of claim 11, wherein the material is not allowed to directly contact  
the natural gas.

15. The method of claim 11, wherein the emitted far infrared radiation and negative  
15 ions are introduced to the natural gas via a packed-bed arrangement.

16. The method of claim 11, wherein the material includes about 95% or less by  
weight of a bio-ceramic material and about 5% by weight or less of an oxide material.

17. The method of claim 16, wherein the oxide material is selected from the group  
20 consisting of iron oxide, silicon oxide, titanium oxide, aluminum oxide, magnesium  
oxide, derivatives thereof and combinations thereof.

18. A method for affecting purity of water comprising the steps of:  
25 providing water from a water supply;  
emitting far infrared radiation and negative ions from a material; and  
introducing the emitted far infrared radiation and negative ions to the water from  
the water supply.

19. The method of claim 18, further comprising the step of engaging the material with  
30 a conduit having the water disposed therein to facilitate the introduction of the emitted far  
infrared radiation and negative ions to the natural gas.

20. The method of claim 18, wherein the material is allowed to directly contact the  
water.

21. The method of claim 18, wherein the material is not allowed to directly contact the water.

22. The method of claim 18, wherein the material includes about 95% or less by  
5 weight of a bio-ceramic material and about 5% by weight or less of an oxide material.

23. The method of claim 22, wherein the oxide material is selected from the group consisting of iron oxide, silicon oxide, titanium oxide, aluminum oxide, magnesium oxide, derivatives thereof and combinations thereof.

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